

NATIONAL WEATHER SERVICE INSTRUCTION 10-102

August 28, 2002

***Operations and Services
NWS REQUIREMENTS***

New or Enhanced Products and Services

NOTICE: This publication is available at: <http://www.nws.noaa.gov/directives/>.

OPR: OS11 (E. Atkins)

Certified by: OS1 (M. Tomlinson)

Type of Issuance: Initial.

Signed by _____ August 28, 2002
Gregory A. Mandt Date
Director, Office of Climate, Water,
and Weather Services

New or Enhanced Products and Services

<u>Table of Contents:</u>	<u>Page</u>
1. Purpose.	3
2. Framework.	3
2.1 Applicability.	3
2.2 Process Overview	3
3. Concept Development	3
4. Product/Service Description Document	6
4.1 Format	6
4.2 PDD Approval	6
4.3 Submission of Approved PDDs	6
5. Experimental Product Distribution and Evaluation	6
5.1 Distribution	6
5.2 Feedback and Evaluation	7
6. Approval for Operational Use.	7
6.1 Local/Regional Products	7
6.2 National Products	7
6.3 Customer/Field Notification.	7
6.4 Directives Review/Official Product Designation	7
7. Product Feedback on Operational Products	7
7.1 Feedback Statements	7
7.2 Periodic Feedback Notices	7
7.3 Feedback Review	8
8. Provision for Emergencies	8
Appendices	
A. Definitions	A-1
B. Guidelines for Proposing NWS Products/Services for National or Local/Regional Implementation	B-1
C. Examples of PDDs	C-1
D. Dissemination and Feedback	D-1
E. Evaluation and Recommendation Guidance	E-1
F. NWS Customer Survey for Experimental Products/Services	F-1

1. Purpose. To describe the procedures by which a product or change to an existing (operational and official) product will be implemented. The objectives of these procedures are to:
 - a. Establish an orderly process to document National Weather Service (NWS) products and services;
 - b. Subject proposed products and services to external review and comment;
 - c. Establish steps to evaluate comments; and decide if the product should be made operational and official.
 - d. Encourage innovation in developing new products and services while providing sufficient controls to ensure sound scientific methods, mission relevance, and equitable services.
2. Framework. Products are either national or regional/local in scope. The following procedural steps will apply to the development of both product types (national products may include an additional prototyping/evaluation step):
 - a. Product/Service Description Document (PDD) development
 - b. Experimental phase (customer/partner feedback)
 - c. National product prototyping (optional)
 - d. Approval for operational use
 - e. Feedback (continuous)
- 2.1 Applicability. These procedures apply to changes to existing operational products and proposed products. Numerical prediction guidance products are exempt.
- 2.2 Process Overview. An overview of the process is provided in Figure 1.
3. Concept Development. New product development may occur at any NWS level. Once the concept for a product has been articulated, the responsible office will:
 - a. Review guidelines (see Appendix B) to ensure the proposed product is consistent with the NWS mission.
 - b. Review the NWS Product Inventory database to ensure work is not already underway or completed on a similar product.

- c. Follow accepted practices and applicable policies in developing product prototypes (e.g. change management procedures).
- d. Determine the appropriate geographic area.
- e. Prepare a PDD.

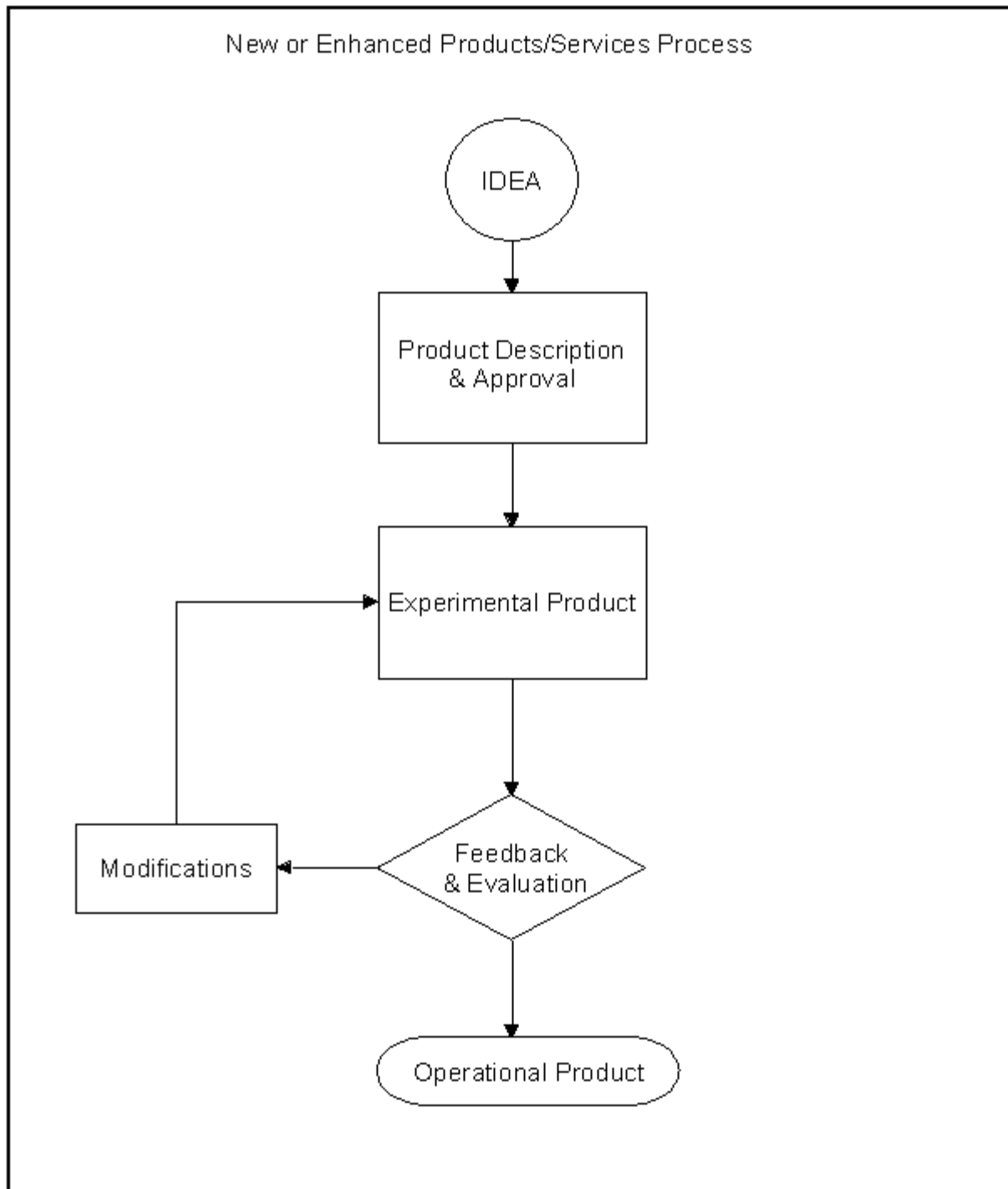


Figure 1. Process Overview

4. Product/Service Description Document.

4.1 Format. The PDD has the author respond to the five journalistic questions (who, what, when, where, and why) to describe the content, format, and purpose of the product. When modifying existing products or developing new ones, it is critical to understand the intended use of, and the mission need for the product. The PDD will have the following components:

- a. Mission Connection
 - (1) Product/Service Description
 - (2) Purpose/Intended Use
 - (3) Audience
 - (4) Presentation Format
 - (5) Feedback Method
- b. Technical
 - (1) Format and Science Basis
 - (2) Availability
 - (3) Additional Information

A more detailed description of how to complete a PDD is included in Appendix B and example PDDs are in Appendix C.

4.2 PDD Approval. Each PDD will be approved by the appropriate NWS Director(s) before experimental dissemination. If the proposed product involves users in only one NWS region, that regional director approves the PDD. If implementation of a regional product involves multiple NWS offices, the directors of all affected NWS regions must coordinate on the PDD. The PDD will be approved by the originating director. If the proposal involves a national-scale product from local offices or one of the National Centers for Environmental Prediction (NCEP), the Director, Office of Climate, Water, and Weather (OCWWS), will approve the PDD. The PDD will be approved/disapproved by the appropriate director via a written response within 21 working days of receipt. If approved, the response will specify the duration of the feedback period.

4.3 Submission of Approved PDDs. An approved PDD will be forwarded to OCWWS (via NWSProducts@noaa.gov). OCWWS will maintain a catalog of PDDs with links to all experimental products. Regional directors will provide to the OCWWS Director the latest PDD to ensure that the catalog is current.

5. Experimental Product Distribution and Feedback.

5.1 Distribution. Once approved, the responsible office will distribute the product with the primary purpose of receiving customer feedback. The product's labels must clearly identify it as experimental. If the product is available via the internet, the Uniform Resource Locator (URL) of the page will be forwarded to OCWWS.

5.2 Feedback and Evaluation. Procedures to use in obtaining feedback are outlined in Appendix D. An OMB-approved Customer Survey is provided in Appendix F. Evaluation guidelines are contained in Appendix E. At the conclusion of the feedback period, the approving NWS Director(s) will evaluate the experimental product, taking into account customer feedback and determine if the product should be terminated or permanently implemented.

6. Approval for Operational Use.

6.1 Local/Regional Products. Regional directors will approve/disapprove new products or product enhancements intended for local use. Regional products for users in more than one NWS region must be approved by all appropriate directors.

6.2 National Products. The OCWS Director will approve/disapprove new national products or product enhancements and provide a copy of the product evaluation to all affected NWS units. The OCWS Director may choose to initiate an expanded prototype and feedback phase prior to making a decision on operational use.

6.3 Customer/Field Notification. Customers will be provided 30 days notification prior to discontinuing an experimental product or conversion of an experimental product to operational status. Notification will be made using Public Information Statements and by issuing service change notices for the applicable dissemination pathways (e.g., Family of Services, NOAA Port, EMWIN) through the responsible offices. If applicable, notification should also occur on the Web site that contains the product.

6.4 Directives Review/Official Product Designation. The approving NWS Director will conduct a review of NWS directives for any necessary changes and initiate actions to accomplish these changes. When all required changes are complete, the operational product will be designated as an official NWS product.

7. Product Feedback on Operational Products. NWS will seek ongoing user feedback on official products.

7.1 Feedback Statements. For products that lend themselves to the inclusion of a statement requesting feedback, the statement will include the name of the person responsible for receiving feedback for each specific product and instructions on how to submit comments. Web-based products will include a link to the Customer Survey (Appendix F).

7.2 Periodic Feedback Notices. For products that do not lend themselves to the inclusion of such a statement, periodic notices via Public Information Statements and/or other appropriate mechanisms will be transmitted on the same data stream as the product(s) in question.

7.3 Feedback Review. Each person responsible for receiving feedback will review the feedback at least annually and, when necessary, pursue modifications to the product.

8. Provision for Emergencies. If life and safety concerns require emergency dissemination of NWS information in a form other than an official product, the responsible office will do so. If the office(s) involved intend to continue issuing this information as a new product, the provisions of this directive will be followed as soon as possible.

APPENDIX A DEFINITIONS

Customers	Users of NWS weather information and services
Customer Products	Products developed to meet end-user requirements
Data Service	Any capability provided by NWS for customers to interactively access a subset of NWS data
Experimental Products	Products available for testing and evaluation for a specified, limited time period for the explicit purpose of obtaining customer feedback
NCEP	National Centers for Environmental Prediction
OCWS	Office of Climate, Water, and Weather Services
Official Products	Operational products defined in NWS policy
Operational	Produced on a reliable and continuous basis
Local Operational Implementation	A locally generated product produced at a particular NWS site(s) for a sub-national user-defined area
Regional Operational Implementation	A locally generated product at several NWS site(s) for a sub-national user-defined area that often extends across NWS regional boundaries
National Operational Implementation	A locally generated product produced at all sites of the same type (e.g., WFOs, centers) for users nation-wide.
Partners	Companies, corporations, vendors, agencies, universities, etc., that associate with NWS in the distribution of weather information
PDD	Product/Service Description Document
Product ¹	Any collection of NWS information in a defined format
Service	Any method for providing NWS information

¹NOTE: While the term “product” is used almost exclusively in this document, all elements of this instruction refer to both ‘Experimental NWS Products and Data’ and ‘Data Services’ (as defined above).

APPENDIX B
Guidelines for Proposing NWS Products/Services for National or Local/Regional Implementation

1. Introduction. Advances in science and technology (e.g., Interactive Forecast Preparation System (IFPS)), national digital forecast data base, and Advanced Hydrologic Prediction Services provide the capability to produce better information in multiple formats for use by customers and partners. We must consider the content and format of proposed new products to ensure they meet our mission, effectively convey information, and are understandable and consistent in format.
2. Guiding Principles. The government must act in a fair and evenhanded manner. To maximize fairness and openness, we will follow the six principles outlined below when interacting with customers and partners and considering modifying existing or creating new products and services.
 - a. Mission connection - Describe the connection to the NWS mission.
 - b. Life and property first - Put life and property protection first in the allocation of resources and the development and dissemination of products and services.
 - c. No surprises - Provide all users, including those in the private sector, adequate notice and opportunity for input into decisions regarding the development and dissemination of products and services.
 - d. The taxpayers own the data - Open and unrestricted dissemination of publicly funded information is good policy and the law.
 - e. Equity - Be equitable in dealings with various classes of entities and do not show favoritism to particular classes of partners, particularly those in the academic and commercial sectors. Do not provide a service to a segment of the user community that cannot be provided to all similar types of users.
 - f. Maintain and explain the routine - When faced with requests for specifically tailored services, make sure the customer fully understands the products which NWS “routinely” provides. Refer requests for specifically tailored products/services to the private sector.
3. Detailed explanation of Product/Service Description Document
 - 3.1 Part I - Mission Connection. A brief description of the product/service as well as responses to questions designed to stimulate thought about content and format plus rationale for the product or service.
 - a. Product/Service Description - Provide a brief description of the experimental product.

- b. Purpose/Intended Use - Why should the NWS be producing this information? Is the product applicable to our general mission or to a well-established area of service?
Keep in mind:
 - (1) There are specific areas where NWS has been prohibited from providing services (e.g.):
 - (a) non-federal, non-wildfire fire support
 - (b) specific agricultural forecasts
 - (2) New products should be developed to satisfy valid user needs/requirements.
 - (3) Products created to support another government agency's mission should document the request from that agency.
- c. Audience - Who is the intended audience for the product? For example, is the product intended for the general public, for government decision makers, etc. Remember to consider principles d and e in Section 2 above. In general, specialized products/services for a limited number of customers (e.g., for a particular company/firm) are not allowed.
- d. Presentation Format- How is the information presented (e.g., text, graphic) and why have we chosen to present it in this manner?
 - (1) We should aim to make currently available forecast information readily accessible, usable, and understandable.
 - (2) We should aim for presentations of forecast information to be consistent across the country.
 - (3) Presentations in a proprietary format are generally not acceptable. Stick to formats which are widely accepted as standards (e.g., GRIB, HTML).
 - (4) We should not expend resources to produce "cool" or "cute" presentations of information if no specific benefit is provided.
- e. Feedback Method - Identify where comments on the new product can be addressed.
 - (1) Follow the guidelines in Appendix D for collecting feedback on the product from the user community.

(2) Include an office physical and e-mail address or regional/national address as appropriate.

(3) State the proposed length of the experimental feedback period.

3.2 Part II - Technical Description

- a. Format and Science Basis - What are the technical limitations of this information?
- b. Availability - When is the information available? How often is the product updated?
- c. Additional Information - Include any other pertinent technical details, such as:
 - (1) Who created the product (person, office).
 - (2) What data are used to generate the product (e.g., model output).
 - (3) Software package that can be used to decode or display the product.
 - (4) References to relevant technical or scientific publications (e.g., UGC or VTEC).

APPENDIX C

Examples of PDDs

Wireless Internet Marine Service Product/Service Description Document

Part I - Mission Connection

The National Weather Service (NWS) provides various marine weather warnings and forecasts for the public and disseminates these products through various means. Since there are fewer methods to receive weather information on water than on land, NWS often receives requests to improve ways to communicate marine information in interactions with marine users at boat shows, customer meetings, marine conferences, etc. This Product Description Document concerns an improved method to reach users of NWS marine products by reformatting existing NWS marine products (see list below) to support access via wireless internet protocols. This straightforward extension of existing NWS Internet capabilities requires minimal effort by NWS to reformat existing NWS marine products and provide them from existing NWS internet servers using Wireless Markup Language (WML) (see technical description below). These products are available to anyone provided they have an Internet Service Provider (ISP) who delivers the products to a device which supports WML. Since these products are in the public domain, they can also be acquired by intermediaries, repackaged, and re-transmitted in accordance with standard NWS product use policies.

During the experimental use period, WFO MHX, will reformat the following marine products to support WML:

- Coastal Waters Forecast (CWF)
- Special Marine Warnings
- Marine Weather Statements

Continuation/expansion of this service will depend on the results of the experimental use period.

Comments

We are always seeking to improve our services based on user feedback. Comments on the use of wireless Internet language may be addressed to:

National Weather Service
123 Nameless Rd.
Anywhere, USA
Attn: John Doe

E-mail comments can be sent to john.doe@noaa.gov

Experimental Feedback Period: August 4 through November 29, 2002

Part II - Technical Description

Wireless Internet access is accomplished through the Wireless Application Protocol (WAP), the wireless equivalent to hyper text transfer protocol (HTTP). The WAP is an open and public specification meeting industry standards. The language used for WAP is called Wireless Markup Language (WML) and is a subset of hyper text markup language (HTML). WML was designed for devices with small displays. Any current Internet text or HTML and some graphics can be converted to WAP/WML. WAP/WML allows suitably-equipped cell phones and Personal Digital Assistants (PDAs) to receive our forecasts through a wireless ISP. The NWS WAP/WML forecasts are delivered directly from standard Web servers to the Internet. WFO MHX is not acting as an ISP but merely as the originating source of the information. The wireless ISPs maintain and operate the necessary WAP gateways and cell networks that convert the Internet packets to digital radio and transmit the requested information to their customers.

Wireless networks have a limited bandwidth, and the available WAP-equipped cell phones and PDAs have very limited storage capacities. The end result is individual pages of information must be relatively small in size. Since marine products, such as the Coastal Waters Forecast (CWF), can be relatively lengthy, the WML-formatted messages must be split into a series of short segments with links added to aid the users' navigation through the document. Since CWFs are prepared for marine zones, it is a simple job to transmit the CWF in zones rather than in a much larger all-in-one package. Each CWF zone product will be fed through the WML conversion and then be tested on a variety of publicly-available WAP emulators, just as any new HTML product must be tested on a wide variety of browsers, platforms, and screen resolutions before deployment.

The CWF is issued four times a day and updated as necessary.

Graphical Forecast Table Product Description Document

Part I - Mission Connection

- a. Product Description - The National Weather Service's (NWS) Graphical Forecast Table provides a graphical representation of digital/tabular forecasts of maximum temperature, minimum temperature, probability of precipitation, 3- hourly temperatures, dewpoint temperatures, relative humidity, sky condition, wind direction and speed, obstruction to visibility, and precipitation type.
- b. Purpose - The Graphical Forecast Table is derived from forecast weather parameters found in the Area Forecast Matrix (AFM). The AFM is primarily intended for use by large volume users of NWS forecast information and for automated retrieval of forecast parameters. This format may be difficult for much of the general public to read and interpret. Therefore, in an effort to support NWS Strategic Plan and its goal to provide graphical weather products, the AFM has been reformatted into a graphical product that is easier to interpret and understand.
- c. Audience - The target audience for this experimental graphical product is the general public. The product is available to anyone who has an Internet connection. Since this product is in the public domain, it can be acquired by intermediaries, repackaged, and re-transmitted in accordance with standard NWS product use policies. Using advances in computer capabilities, as well as scientific advances to create customer-based products and services, the National Weather Service, through the Graphical Forecast Table, strives toward the following goals:
 - ▶ provide customers with forecast information that is easy to interpret and understand
 - ▶ provide timely and readily accessible forecast information
 - ▶ improve and standardize the graphical presentation format of public weather forecast information
- d. Presentation Format - The Graphical Forecast Table is a Web based graphical product displayed as a series of tables composed of iconic images and alphanumeric weather forecast data.
- e. Feedback Method - We are always seeking to improve our products based on user feedback. Comments regarding the Graphical Forecast Table should be sent to the feedback e-mail address on the Web page containing the product. A summary database of comments received is located at: <http://www.werh.noaa.gov/awips/feedback/feedback.htm>.

Technical comments for the Graphical Forecast Table product developer may be addressed to:

National Weather Service

Attn: Tom Kriehn

533 Roberts Rd.

Newport, NC 28570

or e-mail comments to: thomas.kriehn@noaa.gov

Part II - Technical Description

- a. Format & Science Basis - The Graphical Forecast Table is composed of forecast information in digital form and iconic images displaying forecast parameters for maximum temperature, minimum temperature, probability of precipitation, 3-hourly temperatures, dewpoint temperatures, relative humidity, sky condition, wind direction and speed, obstruction to visibility, and precipitation type. A sample of this product is shown in Figure 1.

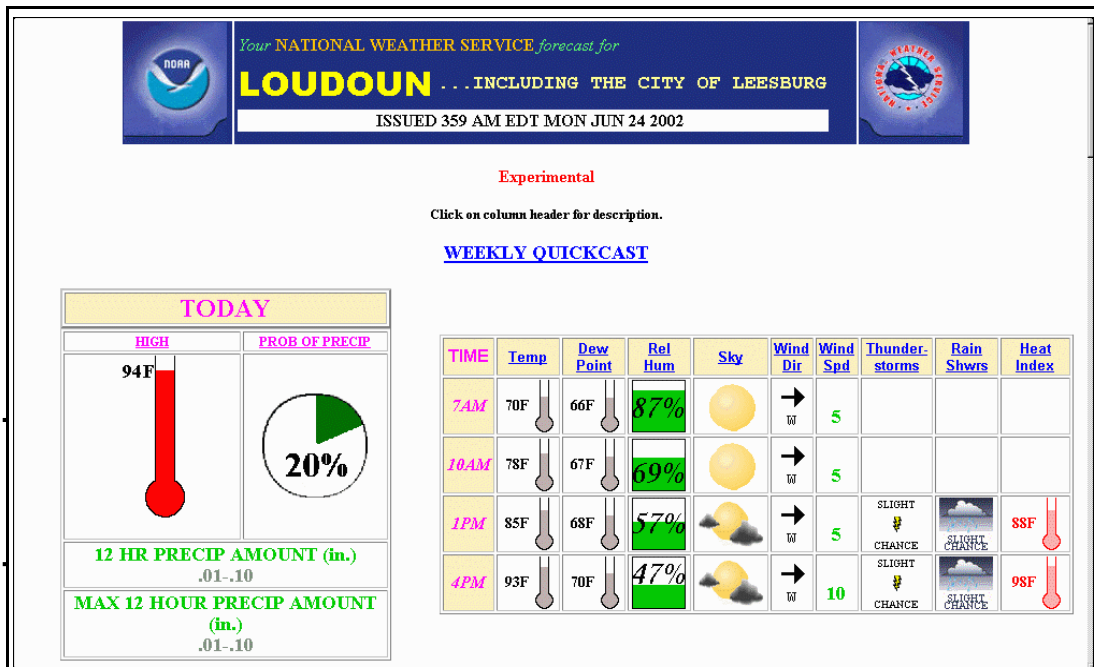


Figure 1. Graphical Forecast Table.

Within the product, links above the parameter columns provide descriptions of the various weather parameters. A link is also available for a “Weekly Quickcast”; a seven day summarization of the forecast in a similar format. Internet links to a realtime Graphical Forecast Table and Weekly Quickcast are provided below.

Graphical Forecast Table Realtime Product Example

Weekly Quickcast Realtime Product Example

1	2	3	4	5	6	7	8																																																															
1234567890123456789012345678901234567890123456789012345678901234567890																																																																						
Product Format				Description of Entry																																																																		
FOaaii cccc ddhmm				(WMO Heading)																																																																		
AFMxxx				(AWIPS ID)																																																																		
AREA FORECAST MATRICES				(MND - NWS Product Name)																																																																		
NATIONAL WEATHER SERVICE city state				(Issuing Office)																																																																		
400 AM EST MON FEB 12 2001				(Issuance Time/Date)																																																																		
stZ###-###>###-ddhmm-				(UGC Type: Zone)-(Exp. Time)																																																																		
county st-county st-county st				(Included County/State)																																																																		
400 AM EST MON FEB 12 2001				(Issuance Time/Date)																																																																		
...HIGH WIND WATCH TUE AFTERNOON...				(Headline if applicable)																																																																		
DATE	MON 02/12/01							TUE 02/13/01							WED 02/14/01																																																							
UTC 3HRLY	08	11	14	17	20	23	02	05	08	11	14	17	20	23	02	05	08	11	14	17	20	23																																																
EST 3HRLY	03	06	09	12	15	18	21	00	03	06	09	12	15	18	21	00	03	06	09	12	15	18																																																
MAX/MIN	51							36 38 39							55 56 60							45							49 50 52																																									
TEMP	33	39	45	46	45	43	41	39	41	45	49	50	49	49	50	48	46	47	47	49	47																																																	
DEWPT	15	17	20	22	25	29	33	34	36	38	40	42	42	43	44	44	44	46	46	43	39																																																	
RH	47	40	36	38	45	57	72	82	82	76	70	73	76	79	79	85	92	96	96	79	73																																																	
WIND DIR	NW	NW	W	W	SW	SW	W	W	S	S	S	S	S	S	SW	SW	S	SE	SE	SE	SE																																																	
WIND SPD	5	8	8	8	8	8	5	2	10	14	28	36	26	22	10	8	5	2	2	5	8																																																	
WIND GUST										22	25	42	56	52	34	20																																																						
CLOUDS	OV	OV	OV	OV	BK	BK	SC	BK	BK	BK	BK	BK	OV	OV	OV	OV	OV	OV	BK	BK	BK																																																	
POP 12HR	10							10							20							70							50																																									
QPF 12HR	0							0							0							.25-.49							.10-.24																																									
MAX QPF	0							0							0							.25-.49							.10-.24																																									
SNOW 12HR	00-00							00-00							00-00																																																							
RAIN															S							C							C							L							L							L							L							C						
OBVIS	K							K																					F							F							F							F							F													
WIND CHILL 6HR	30	30																																																																				
MIN CHILL	24																																																																					
HIGH WIND															A								A																																															
DATE	THU 02/15/01							FRI 02/16/01							SAT 02/17/01							SUN 02/18/01																																																
UTC 6HRLY	05	11	17	23	05	11	17	23	05	11	17	23	05	11	17	23	05	11	17	23	05																																																	
EST 6HRLY	00	06	12	18	00	06	12	18	00	06	12	18	00	06	12	18	00	06	12	18	00																																																	
MAX/MIN	35							46							34							41							24							33							18							30																				
TEMP	41	39	44	43	40	36	39	34	29	24	29	26	22	19	28	24																																																						
DEWPT	38	36	36	38	37	34	34	32	26	22	21	18	16	16	20	21																																																						
PWIND DIR	SE							S							SW							NW							N							N							SE							SE																				
WIND CHAR	LT							LT							LT							LT							BZ							WY							LT							LT																				
AVG CLOUDS	BK							OV							BK							BK							FW							CL							FW							SC																				
POP 12HR	30							40							40							30							20							20							40							60																				
RAIN								C																																																														
RAIN SHWRS								C																																																														
\$\$																																																																						

b. Product Availability

The AFM is routinely issued within 30 minutes of the two mandatory forecast packages produced between 1:30 and 5:30 am/pm local time. However, updates may be issued at any time as conditions warrant. When the AFM is issued, a local application program runs automatically which reformats the AFM into hypertext markup language (HTML). The product is then transmitted automatically to the Internet server hosting the local NWS home page. When displayed with an Internet browser, graphical forecasts for up to seven days in advance can be viewed. These products are compliant with the 1998 Amendment to Section 508 of the Rehabilitation Act.

c. Additional Information

- (1) The Graphical Forecast Table was created by Carin Goodall, WFO
Newport/Morehead City, NC
- (2) Refer to NWSI 10-503, WFO Public Weather Forecast Products Specification for a technical description of the Area Forecast Matrices (AFM) product.

EXAMPLE

APPENDIX D

Dissemination and Feedback

Experimental Product Web Page

Experimental products will be accompanied by a Web page that, as a minimum, contains the following:

- ✓ A brief statement of the intended use of the product, “*experimental*” label and the evaluation period, for example:

“New Product Name” is an experimental product that will be posted to this page for evaluation from (beginning date) to (ending date). During this period, we encourage your comments or suggestions for improvements using the electronic survey provided. Your feedback will help us determine product utility, if modifications are needed, and whether the product should become part of our operational suite.

- ✓ Link to a Product/Service Description Document (PDD)
 - ✓ Point of Contact (address/phone/e-mail) to address additional comments/feedback
 - ✓ Link to the generic NWS Headquarters customer survey (see Appendix F) or other OMB-approved survey
 - ✓ Date when Web page was last updated
-

Feedback Solicitation

1. Public Information Statement

Locally-generated Public Information Statements (PNS) will be issued before distribution of any experimental products. The PNS will include a brief description of the product/service, Web address, evaluation period, and a local and/or regional point of contact.

2. Other Methods for Soliciting User Feedback.

In addition to the Web-based experimental product survey, offices should actively seek comments on products. The following examples are ways to seek user feedback.

- ✓ Customer/Partner Workshops
- ✓ Weather Forecast Office (WFO) Warning Coordination Meteorologist Emergency Management meetings and SKYWARN training sessions
- ✓ WFO Outreach (open house events, school and community visits, workshops, fairs, conventions, expos, seminars)
- ✓ Conferences of professional organizations

APPENDIX E
Evaluation and Recommendation Guidance

The product evaluation will consist of the following:

1. A technical evaluation of the product including assessment of skill and the scientific basis of the product.
2. An evaluation of comments received including assessment of public reaction, whether stated user needs have been met, or whether further development is required. Describe outreach activities intended to educate affected customers and invite their comments.

APPENDIX F

OMB Control Number 0648-0342

Expires 7/31/2004

NWS Customer Survey for Experimental Products/Services

1. Name of Product/Service: _____
2. On a scale of 0 to 10 (10 high), rate technical quality of this product/service (e.g., forecast accuracy, timeliness, problems with display). Please provide specific comments. _____
3. On a scale of 0 to 10 (10 high), rate how easy you found the product/service to interpret and use. Please provide any suggestions for improving the usability of this product. _____
4. What features did you like or find useful? _____
5. What features did you not like? (Explain briefly) _____
6. How often do you use this product/service?

___ daily	___ several times a day
___ weekly	___ several times a week
___ seasonally	___ occasionally
___ other _____	
7. Tell us how you plan to use the information provided in this product/service (e.g., information only, to support personal decision-making, to support business decision making, etc)? _____
8. Comments on the Product/Service Description Document (documentation) provided. _____
9. Any additional comments/suggestions concerning this product/service. _____
10. What is your affiliation?

___ individual	___ student/teacher	___ university student
___ university faculty	___ other research instit.	___ business/industry
___ NOAA	___ other Federal govt.	___ news/media
___ state/local govt	___ other _____	
11. Your name, e-mail, and address are requested so that we may verify comments/suggestions if necessary.

Name: _____

Date: _____

E-mail: _____

Address: _____

Paperwork Reduction Act Information: NOAA offices seek to determine whether their customers are satisfied with the services and/or products they are receiving and whether they have suggestions as to how the services/products may be improved or made more useful. The information will be used to improve NOAA's products and services. Responses to this survey are completely voluntary. No confidentiality can be provided for responses, but you need not supply your name or address. Public reporting burden for this collection of information is estimated to average 5 minutes per response. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Richard Roberts, CIO-PPA, Station 9823, 1315 East-West Highway, Silver Spring, MD 20910. Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the Paperwork Reduction Act, unless that collection of information displays a currently valid OMB Control Number. The response time for a specific survey will depend upon the subset of questions selected, and will be entered before the survey's informal submission to OMB.